# REINVASION BY FOREST RODENTS: HOW CAN WE MAINTAIN REDUCED POPULATIONS?

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Abstract:

Correct application of effective baits, traps, or fumigants can temporarily reduce populations of forest rodents. However, these methods seldom provide more than short-term protection of forest crops because other rodents rapidly reoccupy intact nests in existing burrow systems. Both pocket gophers (Thomomys spp.) and mountain beavers (Aplodontia rufs) reinvade existing nests in good habitats within days after control methods are applied. Available commercial baits designed to control reinvasion have not been effective on forest sites. Frequent use of other baits on the same sites may exceed label limits and reduce bait efficacy.

Population densities after control have often returned to their original levels when crop protection is needed most. Fall baited pocket gopher populations recover by spring planting time. Winter baited/trapped mountain beaver populations recover within a few months. A study of next removal coupled with population removal of mountain beavers shows long term (5 yr) reduction of reinvasion and adequate crop protection.

Greater emphasis is needed on reducing reinvasion. Research is needed to 1) identify sources of reinvasion, 2) evaluate and manipulate habitats, 3) remove or treat nests with repellents, 4) test semi-permanent underground stations to apply chemosterilants and/or toxic baits and for injecting fumigants, and 5) evaluate reduction of populations and nests prior to forest harvest. Control of reinvasion should be a strategic part of population reduction to protect crops.